

POWDERY MILDEW OF ROSE

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Powdery mildew is one of the most important diseases of roses in Florida during the spring and fall months (2). Mildew of rose is found world-wide and is caused by either of two species of the fungus—*Sphaerotheca pannosa* (Wallr.) Lev. var. *rosae* Wor., which is the most commonly reported species, and *S. macularis* (Wallr. ex Fr.) Lind. (*S. humuli* (D.C.) Burr) (1,3,4,5).

SYMPTOMS. Infection occurs primarily on young developing leaves, shoots, buds, and flowers. White to gray-white powdery superficial patches of mycelium and conidia (spores) may occur at random or entirely cover the infected plant parts (Fig, 1). Leaves become distorted, dwarfed, and may produce a reddish or purplish color under the white mycelium. Flower buds often fail to open, and partially opened flowers may become distorted.

DISEASE DEVELOPMENT. Because of moderate temperatures in Florida, the fungus may overwinter as conidia or mycelium on infected tissue. The perfect stage of the fungus (cleistothecium) may form under conditions unfavorable for the vegetative parts (5). The conidia are wind-borne and germinate easily under conditions of high relative humidity (95 to 99% RH) and moderate temperatures (71 to 82 F) (1). In contrast to most fungi, spores of this pathogen do not germinate readily in the presence of free moisture. Thus, the development of mildew is restricted during rainy periods.



Fig. 1. White patches of powdery mildew on distorted leaves of rose.

CONTROL. Although there are differences in varietal resistance, few varieties are regarded as immune to attack by powdery mildew (6). Under conditions favorable for development of the fungus, protective fungicides such as Karathane, Actidione PM, Benlate, Phaltan or Parnon are suggested for control according to the manufacturer's recommendations (2,6). Effectiveness of several of these fungicides can be improved with the addition of a surfactant.

Literature Cited

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